What is claimed is:

1. A glass-ceramic material capable of forming glass-ceramic articles having a surface roughness Ra < 75 nm without polishing, containing β-quartz solid solution as the predominant crystalline phase, having a linear coefficient of thermal expansion in the temperature range between 25°C and 300°C of $\leq 10 \times 10^{-7} K^{-1}$, a light transmission at 1050 nm of >80% at a thickness of 3 mm, and a composition, by weight of the total composition, comprising 56-67% SiO_2; 19-22% Al_2O_3; 3.4-3.8% Li_2O; 1.8-2.6% ZnO; 1.5-2.5% MgO; 3.3-5% TiO_2; 0-2.5% ZrO_2; 1.5-3% B_2O_3; 0-6% P_2O_5; 0-0.6% F; less than 500 ppm Fe_2O_3; and components resulting from at least one refining agent.

2. A glass-ceramic material in accordance with claim 1 which comprises 2-4% by weight of P_2O_5.

3. A glass-ceramic material in accordance with claim 1 which comprises 0.3-0.5% by weight of F.

4. A glass-ceramic material in accordance with claim 1, wherein β-quartz solid solution constitutes at least 95% by volume of the glass-ceramic material.

5. A glass-ceramic material in accordance with claim 4, wherein the remainder of the crystalline phases of the lamp reflector consists essentially of rutile and gahnite.

6. A glass material having a composition, by weight of the total composition, comprising 56-67% SiO_2; 19-22% Al_2O_3; 3.4-3.8% Li_2O; 1.8-2.6% ZnO; 1.5-2.5% MgO; 3.3-5% TiO_2; 0-2.5% ZrO_2; 1.5-3% B_2O_3; 0-6% P_2O_5; 0-0.6% F; less than 500 ppm Fe_2O_3; and components resulting from effective amount of at least one refining agent.

7. A glass material in accordance with claim 6 which comprises 2-4% by weight of P_2O_5.

8. A glass material in accordance with claim 6 which comprises 0.3-0.5% of F.

9. A glass-ceramic lamp reflector substrate containing the glass-ceramic material of claim 1.

10. A glass-ceramic lamp reflector substrate in accordance with claim 9, which is free of surface micro-cracking.

11. A glass-ceramic lamp reflector substrate in accordance with claim 9, which is further coated with visible-reflective, IR-transmissive coating.

12. A glass-ceramic lamp reflector substrate in accordance with claim 9, which has a surface glass layer having a thickness of less than 100 nm.

13. A glass lamp reflector substrate containing the glass material of claim 6.

14. A process for making heat-resistant glass-ceramic lamp reflector substrates, comprising the following steps:

(i) mixing raw materials in amounts such that upon melting thereof a glass is produced of a composition by weight of the total glass composition, comprising 56-67% SiO_2; 19-22% Al_2O_3; 3.4-3.8% Li_2O; 1.8-2.6% ZnO; 1.5-2.5% MgO; 3.3-5% TiO_2; 0-2.5% ZrO_2; 1.5-3% B_2O_3; 0-6% P_2O_5; 0-0.6% F; less than 500 ppm Fe_2O_3; and refining-effective amounts of refining agents,
wherein iron oxide contamination is minimized;

(ii) melting the raw material mixture of step (i) at a temperature up to 1550°C into melted glass followed by refining and homogenization thereof;

(iii) forming the melted glass of step (ii) into glass moldings of lamp reflector substrates having a reflecting surface with an average surface roughness Ra of less than 75 nm;

(iv) annealing and cooling said glass reflector moldings;

(v) raising the temperature of the glass reflector substrate moldings to a nucleating temperature T_n between 600 and 750°C and maintaining the moldings in this temperature range for at least 15 minutes;

(vi) raising the temperature of the glass reflector substrate moldings to a ceramming temperature T_c between 700 and 850°C;

(vii) maintaining the temperature of the reflector substrates at the ceramming temperature for a period of time over 30 minutes to complete crystallization into β-quartz solid solution; and

(viii) cooling the reflector substrates to room temperature;

whereby heat resistant glass-ceramic lamp reflector substrates having β-quartz solid solution as the predominant crystalline phase and a reflective surface having an average roughness of less than 75 nm are produced.

15. A process in accordance with claim 14, wherein:

in step (v), T_n is about 650°C and the glass moldings are brought to this temperature in about 2 hours at about 300°C per hour;

in step (vi), T_c is about 750°C and the moldings are brought from T_n to T_c in about 2 hours at about 50°C per hour;

in step (vii), the moldings are held at T_c (750°C) for about 1 to 2 hours to complete the crystallization; and

in step (viii), the substrates are cooled to room temperature in about 1 hour.

16. A process in accordance with claim 14, wherein nitrate is used as a refining agent when melting the glass.